

What is claimed is:

1. A method of preparing an animal foodstuff composition, said method comprising the steps:
 - (a) providing transgenic algal cells comprising a nucleotide sequence, said nucleotide sequence capable of expressing a non-native metal-binding protein in said transgenic algal cells;
 - (b) binding said metal-binding protein with at least one metal so as to produce a metal-bound adduct of said metal-binding protein; and
 - (c) admixing said metal-bound adduct with said animal foodstuff.
2. A method according to claim 1 wherein said transgenic algal cells are from the genus *Chlamydomonas*. *genus*
3. A method according to claim 1 wherein said transgenic algal cells are from the strain *Chlamydomonas reinhardtii*. *species*
4. A method according to claim 1 wherein said metal-binding protein is adapted to bind a metal selected from the group consisting of chromium, cobalt, copper, iron, manganese, molybdenum, selenium and zinc, and mixtures thereof.
5. A method according to claim 1 wherein said metal-binding protein is chicken Type II Metallothionein.
6. A method according to claim 1 wherein said transgenic algal cells are in a dried state prior to introduction into said animal foodstuff.
7. An animal foodstuff composition comprising:
 - a) an animal foodstuff; and

b) transgenic algal cells expressing a non-native metal-binding protein in said transgenic algal cells, such that said transgenic algal cells contain said metal-binding protein, said metal-binding protein being bound to a metal.

8. An animal foodstuff composition of claim 7, wherein said metal-binding protein is bound to a metal selected from the group consisting of chromium, cobalt, copper, iron, manganese, molybdenum, selenium and zinc, and mixtures thereof.
9. The animal foodstuff composition of claim 7 wherein said transgenic algal cells are of the genus *Chlamydomonas*.
10. An animal foodstuff composition according to claim 7 wherein said transgenic algal cells are of the strain *Chlamydomonas reinhardtii*.
11. An animal foodstuff composition according to claim 7 wherein said metal-binding protein is chicken Type II Metallothionein.
12. An animal foodstuff composition according to claim 7 wherein said transgenic algal cells are in a dried state prior to introduction into said animal foodstuff.
13. A method of providing a dietary metal supplement to an animal, said method comprising feeding to said animal a food stuff comprising transgenic algal cells expressing a non-native metal-binding protein, such that said transgenic algal cells contain said metal-binding protein, said metal-binding protein being bound to a metal.
14. A method of preparing an animal foodstuff composition, said method comprising the steps:

(a) providing algal cells comprising a nucleotide sequence, said nucleotide sequence capable of expressing a non-native metal-binding protein in said algal cells;

(b) binding said metal-binding protein with at least one metal so as to produce a metal-bound adduct of said metal-binding protein; and

(c) admixing said metal-bound adduct with said animal foodstuff.

15. A method according to claim 14 wherein said algal cells are in a dried state prior to introduction into said animal foodstuff.

16. A method according to claim 14 wherein said metal-binding protein is adapted to bind a metal selected from the group consisting of chromium, cobalt, copper, iron, manganese, molybdenum, selenium and zinc, and mixtures thereof.

17. A method according to claim 14 wherein said metal-binding protein is chicken Type II Metallothionein.

18. An animal foodstuff composition comprising:

(a) an animal foodstuff; and

(b) algal cells expressing a non-native metal-binding protein in said algal cells, such that said algal cells contain said metal-binding protein, said metal-binding protein being bound to a metal.

19. An animal foodstuff composition of claim 18 wherein said metal-binding protein is bound to a metal selected from the group consisting of chromium, cobalt, copper, iron, manganese, molybdenum, selenium and zinc, and mixtures thereof.

